EXOTICS AT THE DOOR

The Problem with the Real Problem

By L.R. Schlueter

WARNING! WARNING! It is to the east, west, north and south of us. It can move on its own, or sometimes we carry it. It is in the water, it is small and slimy or scaley, it looks kind of green or brown. It is a problem, and it is coming this way. But will it get here? Stay tuned for more details.

Right before Halloween, this would be a great way to start a story about a hideous creature from outer-space. It is now summer, however – time to go fishing and boating. The potential for a "real problem" is out there and it is just waking up and waiting to take over our lakes.

The "problem" is that the "real problem" does not appear that threatening.

The real problem is that Aquatic Nuisance Species (referred to as ANS) are all around North Dakota. These new species, called exotics, have come from other countries and have few natural controls in their new surroundings. ANS can out-compete native aquatic species for a place to live, they take food from desirable species, and to make matters worse, they are difficult to control once a population becomes established. Simply put, these exotic species are real pests.

ANS appear harmless: a small mussel, a few tiny crustaceans, some plants or a couple of small fish. While ANS do not directly harm humans, they damage our lakes and rivers which reduces boating, fishing or other water-based recreation opportunities.

Following is a summary of the exotic species that are either present in North Dakota, or have established strongholds in nearby states. All of them are a concern for the Game and Fish Department.

Zebra Mussel

Zebra mussels are native to the Caspian Sea area in Asia. They apparently hitched a ride across the Atlantic Ocean in the ballast water of a ship. When the bilge water was pumped out, the zebra mussel found a new home in the Great Lakes of North America. The first specimens were found in Lake St. Clair near Detroit in 1988. They now inhabit the Great Lakes, as well as other inland lakes from Minnesota to Mississippi. In 2000, a specimen was verified in the Missouri River below Gavins Point Dam. These animals can tolerate a wide range of environmental conditions, meaning they can live about anywhere.

A single zebra mussel can filter up to eight quarts of water a day to collect the plankton it feeds on – the same plankton that small game fish need to survive. Zebra mussels effectively rob food from desirable fish.

Not all plankton and organic material that zebra mussels filter out of the water is eaten, some is expelled in mucus – called pseudo feces – that ends up on the bottom, further reducing production in an aquatic system.

While an adult zebra mussel is less than two inches across, a single female can produce as many as one million eggs per year that hatch into microscopic free-swimming larvae called veligers. At about three weeks of age, the sand-grain sized larvae attach to a firm surface, then continue to grow and mature. Population levels can reach as high as 585,284 zebra mussels per square yard.

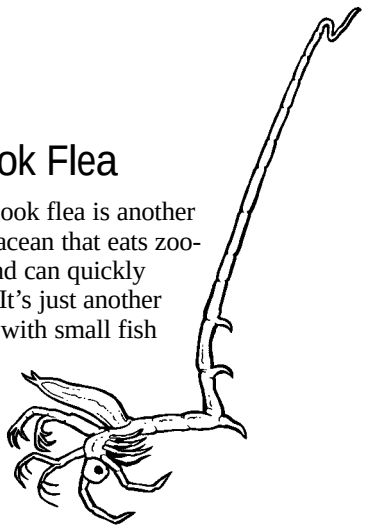
In addition to siphoning food from water, zebra mussels are notorious for clogging underwater structures like intake pipes for municipal water plants. They currently are not present in North Dakota.

Spiny Water Flea

While small in size, the spiny water flea is a predator on zooplankton, the same food that small game fish need to live and grow. When zooplankton numbers are reduced, small fish growth is reduced and survival decreases. The problem is reflected as reduced populations of yellow perch, crappie, bluegill and walleye. These fish also avoid the spiny water flea as food because of its long, sharp, barbed, tail.

A female spiny water flea can produce up to 10 offspring every two weeks during the summer. A spiny water flea population explodes when it becomes established in an area.

A native to Great Britain, they were found in Lake Huron in 1984 and are believed to have come across the ocean in ship ballast water. Spiny water fleas are now in all of the Great Lakes and some inland waters near the Great Lakes. They are not present in North Dakota waters.



Fishhook Flea

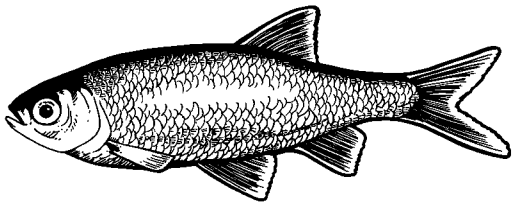
The fishhook flea is another small crustacean that eats zooplankton and can quickly reproduce. It's just another competitor with small fish that can reduce the number of desirable fish in a lake. Their eggs can survive out of water for long periods of time, then hatch when water returns and conditions are favorable.

Native to the Black Sea, the fishhook flea first appeared in 1998 in Lake Ontario after getting a ride in a ship's ballast water.

Eurasian Water Milfoil

Eurasian water milfoil grows into thick mats that hamper boating or swimming and cause fish management problems by providing excess escape cover for small fish so predators cannot feed on them. The result is a weed-choked water body with lots of small fish like perch, no recruitment of predators, and only an occasional thin walleye or northern pike caught by anglers.

The plant reproduces through stem fragments, root runners and by seeds. It takes only one small segment of a plant stem to take root, grow into a plant and produce more plants to form an infestation in a new location. These plants or fragments can live out of water for some time, which means that they can be transported on boat trailers or wrapped around a motor or anchor line. A small plant fragment can be about anywhere. This plant was accidently brought into America from Europe and by the 1980s was found in many Midwest lakes and reservoirs. New populations of Eurasian water milfoil are commonly found in Minnesota lakes each summer. The exotic plant often crowds out desirable native plants and upsets the ecological balance in aquatic systems. Milfoil was apparently documented in the Sheyenne River north of Valley City a few years ago, but further investigations found no evidence that the plant survived in that location.

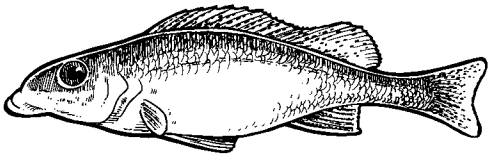


Hungarian Rudd

A small omnivorous fish, the rudd eats plants, insects, zooplankton, fry or small fish. They compete with other fish for food and space. A lake can only support so many fish and when the rudd takes up carrying capacity, there is less room for game fish and the recreational value of a system is reduced.

Rudd are hardy, they can live and reproduce in slow-moving rivers, lakes and reservoirs and are tolerant of poor water chemistry. They spawn more than once during the year and a large female can produce as many as 100,000 to 200,000 eggs annually. These traits allow the rudd to quickly take over an aquatic system.

The rudd's home is northern Russia, but it was brought into the United States in the mid-1920s and commercially raised by the baitfish industry where it is sold as golden shiner hybrids, red-finned shiners, "reds," and in pet stores as an aquarium or outdoor-pond fish. The rudd is now found in lakes from Texas to Minnesota, but has not been discovered in North Dakota.



Ruffe

Ruffe compete for food with yellow perch and small walleye, reducing populations of those desirable fish. In addition, ruffe have high reproductive rates and can outnumber other fish in a short time. Ruffe seldom get bigger than five inches in length but their large, spiny fins make them unsuitable prey for predators like big walleye or northern pike.

This fish apparently got into the Great Lakes by hitching a ride in the ballast water of cargo ships from Europe. The ruffe is now well established in the Great Lakes and some inland waters of Minnesota, Wisconsin and other states or provinces bordering the Great Lakes. So far it is not present in North Dakota.

Spreading ANS

Aquatic nuisance species can spread around the country by hitchhiking with humans. Boaters, anglers and water recreators unintentionally move the problem into new areas. Just think of all the places for ANS to hide on a boat: live well, bilge water below the deck, motor cooling system, or in a bait bucket. Let's not forget that ANS might get a free ride on a boat trailer, fishing gear, personal watercraft and scuba gear. Some ANS can live as long as two weeks out of water which helps them move to new locations.

The next question is how to prevent their spread. Quite simply, do not give them a ride.

Preventing the spread of ANS can be accomplished by:

- Inspecting your boat or personal watercraft, the trailer, fishing or scuba gear and removing all plants or plant fragments before leaving any water body.
- Drain water from the motor, livewell, bilge and transom before leaving any water body.
- Wash/dry your boat or PWC, its trailer, all fish tackle and scuba gear or other equipment that has been in the water.
- Disinfect the boat by spraying with high pressure hot water, 104 degrees F or higher, with a solution of one part chlorine bleach to 20 parts hot water.
- Disinfect fishing or scuba gear using hot water and same solution as above.
- Do not release bait or any fish into any lake, except game fish as part of a catch-and-release ethic.
- Take special precautions when leaving waters that may have or are known to have ANS problems, before going to another water body.

It is almost impossible to control an established population of ANS. Rather than treat a problem, it is better to keep the problems out of North Dakota in the first place. We all need to take an active role in preventing the spread of ANS. It is a simple matter that takes a little time and effort and will allow us to maintain the quality of water-based recreation that we now enjoy.

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